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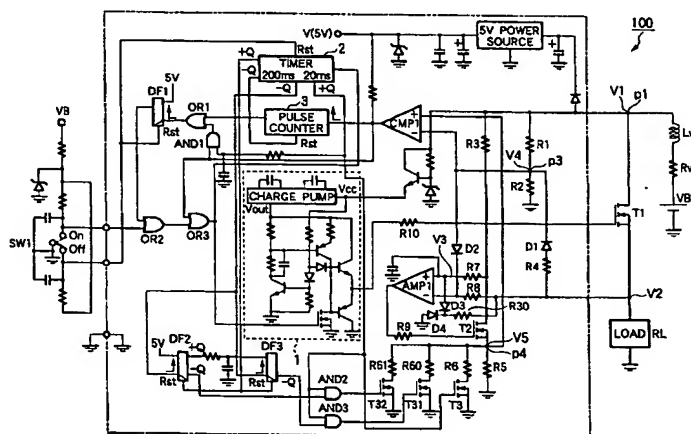
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*For two-letter codes and other abbreviations, refer to the "Guid-
ance Notes on Codes and Abbreviations" appearing at the begin-
ning of each regular issue of the PCT Gazette.*

(54) Title: METHOD OF PROTECTING SEMICONDUCTOR DEVICE AND PROTECTION APPARATUS FOR SEMICON-
DUCTOR DEVICE USING THE SAME



(57) Abstract: A protection apparatus for a semiconductor device includes a DC power source (VB), a load/RL), a semiconductor device arranged between the DC power source and the load and switches the load between a driving state and a stopping state, a comparator (MP1) comparing a voltage drop across the semiconductor device with a predetermined reference voltage, and a cut off unit cutting a conduction of the semiconductor device between the DC power source and the load when the voltage drop is greater than the predetermined reference voltage. A constant of the circuit element is set so that the reference voltage is not greater than a critical voltage. The critical voltage is a product of the on-resistance of the semiconductor device when its channel temperature is at an upper limit of the permissible temperature, and a minimum current value which causes the channel temperature to reach the upper limit of the permissible temperature by the self-heating due to Joule heat.

INTERNATIONAL SEARCH REPORT

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PCT/JP 03/08786

A. CLASSIFICATION OF SUBJECT MATTER
IPC 7 H01L21/00

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 H03K G01R

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	US 6 166 530 A (D ANGELO KEVIN P) 26 December 2000 (2000-12-26) column 2, line 63 - column 3, line 17	1-4
X	EP 1 115 203 A (MATSUSHITA ELECTRIC IND CO LTD) 11 July 2001 (2001-07-11) paragraph '0056! - paragraph '0072!; figure 1	1-4
X	US 6 335 577 B1 (BABA AKIRA) 1 January 2002 (2002-01-01) column 7, line 20 - column 8, line 41; figures 2,3	1-4
X,P	WO 02/097940 A (YAZAKI CORP ; OHSHIMA SHUNZOU (JP)) 5 December 2002 (2002-12-05) page 4, line 7 - page 21, line 15; figures 1-4	1-4
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☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

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C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
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INTERNATIONAL SEARCH REPORT

Information on patent family members

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